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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,454	12/09/2003	Paul E. McKenney		4652

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Pryor Garnett, Counsel
IBM Corporation
Intellectual Property Law Dept., EDO2-805
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EXAMINER

VU, TRISHA U

ART UNIT PAPER NUMBER

2112

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,454

Applicant(s)

MCKENNEY, PAUL E.

Examiner

Trisha U. Vu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,7,15-17,24,25 and 31 is/are rejected.
- 7) ☒ Claim(s) 2,3,5,8-14,18-23 and 26-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) *
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03-30-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-31 are presented for examination.

Claim Objections

2. Claim 30 is objected to because of the following informalities: “said lock mode manager” (line 2) should be changed to “said means in the medium for selecting a lock mode” to be consistent with claim 24. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 6-7, 15-17, 24-25, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ho (5,615,373).

As to claim 1, Ho teaches a method for dynamically determining a lock mode in a multiprocessor, comprising: (a) maintaining first and second system-wide measures (by servers 14, 16,...) of read and write acquisitions (system statistics: file read access rate, file write access rate, system read/write ratio,...); and (b) determining a lock mode (locks with different lifetimes) based upon at least some of said measures (Figs. 1-2, col. 4, lines 9-48 and claim 11).

As to claim 4, Ho further teaches switching to the lock mode from another lock mode (determining another lock lifetime) (col. 6, lines 21-45).

As to claim 6, Ho further teaches said determining step is further responsive to a quantity of units in the system (e.g. the number of client workstations) (Fig. 2 and col. 4, lines 42-47).

As to claim 7, Ho further teaches said unit is selected from a group consisting of: a CPU, a thread, a processor, a transaction, a co-routine, a thread in a multithreaded architecture, a NUMA module, and a task (workstations) (col. 4, lines 42-47).

As to claim 15, Ho further teaches periodically updating at least some of said system-wide measures (col. 5, lines 1-46 and col. 6, lines 21-45).

As to claim 16, Ho further teaches at least some of said second system-wide measures are selected from a group consisting of: a digital filter, a weighted average, a sliding window average, a finite impulse response, and a central data structure (e.g. in server 14) (col. 5, lines 1-45 and col. 6, lines 5-45).

As to claim 17, Ho teaches a computer system comprising: multiple processors (Fig. 2); first and second system-wide measures of read and write acquisitions of said processors (system statistics: file read access rate, file write access rate, system read/write ratio); and a lock mode manager (by servers 14, 16,...) adapted to select a lock mode responsive to at least some of said measures (Figs. 1-2, col. 4, lines 9-48 and claim 11).

As to claim 24, Ho teaches in a multiprocessor system, an article comprising: a computer-readable signal bearing medium (Figs. 1-2); means in the medium for maintaining first and second system-wide measures of read and write acquisitions (system statistics: file read access rate, file write access rate, system

read/write ratio,...); and means in the medium for selecting a lock mode (locks with different lifetimes) responsive to at least some of said measures (Figs. 1-2, col. 4, lines 9-48 and claim 11).

As to claim 25, Ho further teaches the medium is selected from a group consisting of: a recordable data storage medium and a modulated carrier signal (file servers 14, 16,... or the whole computer system 10) (Fig. 1 and col. 3 line 47 to col. 3 line 8).

As to claim 31, Ho further teaches at least some of said second system-wide measures are selected from a group consisting of: a digital filter, a weighted average, a sliding window average, a finite impulse response, and a central data structure (e.g. in server 14) (col. 5, lines 1-45 and col. 6, lines 5-45).

Allowable Subject Matter

4. Claims 2-3, 5, 8-14, 18-23, 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 2, 18, 26 include the limitation of the lock mode is selected from the group consisting of: a distributed reader-writer lock mode, a centralized reader-writer lock mode, and an exclusive lock mode, which is not shown by the prior art of record in the combination as disclosed and claimed.

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Claims 5, 20, 27 include the limitation of the lock mode is a distributed reader-writer lock mode, and wherein said determining step is responsive to the system-wide measure of write acquisitions and the system-wide measure of read acquisitions, which is not shown by the prior art of record in the combination as disclosed and claimed.

Claims 8, 21, 28 include the limitation of the lock mode is a centralized lock mode, and wherein said determining step is responsive to the system-wide measure of write acquisitions and the system-wide measure of read acquisitions, which is not shown by the prior art of record in the combination as disclosed and claimed.

Claim 9 includes the limitation of maintaining a system-wide measure of read-hold duration, which is not shown by the prior art of record in the combination as disclosed and claimed.

Claims 22 and 29 include the limitation of the lock mode is a centralized lock mode, and wherein the selecting a lock mode is responsive to the system-wide measure of read acquisitions and a system-wide measure of read-hold duration, which is not shown by the prior art of record in the combination as disclosed and claimed.

Claim 23 includes the limitation of the lock mode is an exclusive lock mode and wherein said lock mode manager is responsive to a system-wide measure of read-hold duration, which is not shown by the prior art of record in the combination as disclosed and claimed.

Response to Arguments

Applicant's arguments filed 08-19-04 have been fully considered but they are not persuasive:

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With respect to Applicant's argument on pages 3-5 of the Remarks that "Ho does not determine the type of clock that may be appropriate based upon system measures. Rather, the mode of Ho pertains to the lifetime, i.e. duration, of the lock", it is noted that "lock modes" are interpreted as locks with different lifetimes as taught by Ho (Figs. 1-2, and col. 4, lines 9-48), i.e. *lock with one lifetime is one lock mode and lock with another lifetime is another lock mode*. Applicant further stated "Ho neither teaches or implies Applicant's limitations of determining a lock mode, wherein the mode pertains to the form of reader-writer lock, as apposed to Ho which determines a lock mode, wherein the lock mode is the finite lifetime of the lock being granted", it is noted that the features upon which applicant relies (i.e., *the mode pertains to the form of reader-writer lock*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

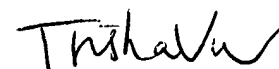
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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trisha U. Vu whose telephone number is 571-272-3643. The examiner can normally be reached on Mon-Thur and alternate Fri from 8:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Trisha U. Vu
Examiner
Art Unit 2112

uv



SUMATI LEFKOWITZ
PRIMARY EXAMINER